



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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In Reply Refer To: NV-031-m50davis

To: Jeff Starosta - CASO/CA/BLM

From: Mike Davis - Civil Engineer Tech. CCFO/NV/BLM

Subject: Fulstone Road Improvement Proposal

On Thursday September 11, 2003, I was invited to assess Cinnabar Canyon road with Jeff Starosta, Larry Primosch, and Joy Fatooh (Bishop Field Office, BLM) and Richard Fulstone (permittee). This road was originally designed and placed using good road engineering standards. The roadway has proper slope and drainage characteristics and is in relatively good condition. The problem with the road is that it has not been properly maintained. Originally, the road was flat bladed. Any subsequent grading was also flat. This method has left the road below the surrounding grade in several areas. The existing berm that was left by the original road builder needs to be brought back onto the road to reestablish grade height. This berm material will suffice to reestablish grade on most of the road, but in several areas of the road, material needs to be brought in to repair low spots. If available, there is good pit run material at very close proximity (CALTRANS pit). The location and quality of this material makes reconditioning this road very feasible.

Proper reshaping and annual maintenance of this road will be beneficial to slow roadway and surrounding terrain erosion, and should allow the permittee to get cattle trucks in and out of the area twice a year.

The key issues from an engineering standpoint are:

- Widening does not need to occur. If road is kept to original berm width, no roadway widening should be necessary, even the sharper turns will be wide enough for a cattle truck if the berms are brought back into the roadway. This may give the appearance of widening, but the original disturbance appears to include the berm.
- Reshape the road to BLM road standards i.e. Existing water turn outs and rolling dip cross drain structures will suffice, re-establish cross slopes of 4-8% max. (probably closer to 4% for cattle trucks). Crown road where no slope exists. Place waterbars on the one steeper slope. Place pit run material in areas where grade is sunken. Refer to BLM Manual Section 9113 for standards. Or contact me for other reference materials. If possible have a BLM equipment operator or engineer (tech) inspect progress of roadwork. CCFO may be able to help with this.
- Require that annual maintenance be done. Do not allow cattle trucks when road is wet, because of possibility of damaging road and surrounding WSA, (I don't think they'll want to travel this road when it is wet anyway).

Thank you

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APPENDIX I

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